



Montgomery County Fire and Rescue Metro COPDI

May 17th, 2016



Please read "Attachment 1: Statement from FEMS RS1 Member" while we wait to begin
(Units on detail please have your Metro maps with you)

MCFRS - METRO COPDI

Topics

- Recent Events
- SOP Review
- Communications
- Managing 3rd Rail Power
- Evacuation Procedures
- Ventilation Systems and Procedures
- Water Supply Issues
- Rail Officers
- Mock Scenarios

MCFRS - METRO COPDI

PAST EVENTS

- In CY14 the MCFRS responded to 22 METRO Events
 - 6 Metro Box Alarms
 - 14 Metro Other Events
 - 2 Metro ALS Events in ROW
- In CY15 the MCFRS responded to 131 METRO Events

MCFRS - METRO COPDI

PAST EVENTS

- September 5th, 1987
 - CSX Derailment onto METRO ROW



MCFRS - METRO COPDI

PAST EVENTS

- January 6th, 1996
 - Shady Grove Station
 - Brake Failure
 - Operator Killed



MCFRS - METRO COPDI

PAST EVENTS

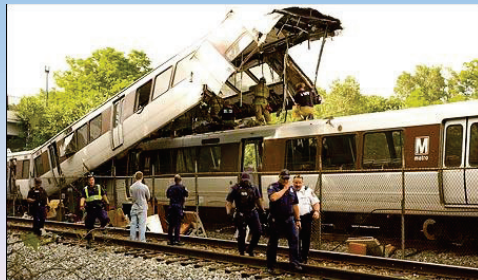
- November 3rd, 2004
 - Red Line- Woodley Park
 - 20 Injuries
 - Brake Issue



MCFRS - METRO COPDI

PAST EVENTS

- JUNE 22, 2009
 - Red Line between Fort Totten and Takoma
 - 9 Dead
 - 52 Transported
 - Cause: Malfunctioning Automatic Train Control System



MCFRS - METRO COPDI

PAST EVENTS

- OTHER PAST EVENTS:
 - January 26, 2010
 - 2 WMATA Track Workers Struck And Killed Outside Shady Grove Station
 - August 19, 2004
 - Train Derailment On Pocket Track At Silver Spring Station
 - July 29th, 2010
 - Live Wire Down Across CSX and METRO Trains
 - June 25th, 2003
 - Car On Tracks Silver Spring

MCFRS - METRO COPDI



PAST EVENTS

- January 12th, 2015
 - Electrical Fire in tunnel near L'Enfant Plaza
 - 84 Transported
 - 1 Death



MCFRS - METRO COPDI



MCFRS - METRO COPDI



MCFRS - METRO COPDI

DC EVENT

- Smoke trapped in train
- Train w/o traction power
- Response Times
- Communications
- 3rd Rail Power Concerns
- Train Access/Doors
- Fan Operation

MCFRS - METRO COPDI

METRO SOP FRC 24-06

MCFRS - METRO COPDI

Metro SOP's

- **FRC Policy 24-06 “Metro Incident Standard Operating Procedures”**
 - **Metro Box Alarm:**
 - Incidents which involve a train fire, collision, derailment or other potential mass casualty incident
 - 5 ENGINES, 3 TRUCKS, 1 SQUAD, 4 TRANSPORTS (2 ALS), 2 BC
 - **Metro Task Force:**
 - Only dispatched in conjunction with a Metro Box; dispatched to next closest station or entry point (portal) on tunnel or elevated event only
 - 2 ENGINES, 2 TRUCKS
 - **Metro Other Event:**
 - Used when the WMATA Rail Operation Control Center (ROCC) reports smoking brakes on a train or insulator fires. Also used trash, brush or other nuisance fires within ROW; even if reported out (courtesy calls)
 - 2 ENGINES, 2 TRUCKS, 1 TRANSPORT, 1 BC

MCFRS - METRO COPDI

Metro SOP's

- Tunnel Event?
 - Box Alarm To Closest Station
 - Task Force To Opposite Station
 - 2-5 Remote Water Supply Engines
 - Specialty Personnel (Rail, NCR Etc) ~1-3 Engines
 - Rough Totals:
 - ~11-17 Engines
 - 5 Trucks
 - 1 Rescue Squad
 - Mass Casualty? EMSTask Force? (2 More Engines)

MCFRS - METRO COPDI

METRO SOP's

- FRC Policy 24-06 “Metro Incident Standard Operating Procedures” (con’t)
- Metro ALS Event
 - Medical events in which individuals are injured or trapped in the ROW or other non-passenger areas (shafts or ancillary rooms beyond end gates) in which ALS injuries are suspected
 - 1 ENGINE, 2 TRUCKS, 1 SQUAD, 1 METRO SQUAD, 1 TRANSPORT (ALS), 1 BC
- Metro BLS Event
 - Medical events in which individuals are injured or trapped in the ROW or other non-passenger areas (shafts or ancillary rooms beyond end gates) in which BLS injuries are suspected
 - 1 ENGINE, 2 TRUCKS, 1 SQUAD, 1 TRANSPORT, 1 BC

MCFRS - METRO COPDI

METRO SOP's

- FRC Policy 24-06 “Metro Incident Standard Operating Procedures” (con’t)
- Key Points Regarding Unit Responsibilities:
 - First Due Engine –
 - Responsible for contacting the ROCC upon arrival and gathering necessary information
 - Third Due Engine –
 - Metro RIC
 - Fourth Due Engine –
 - Responsible for second connection (if needed)
 - First and Second Trucks –
 - Safety Control Units
 - Third Rail/WSADs
 - Wheel Chocks

MCFRS - METRO COPDI

METRO SOP's

- FRC Policy 24-06 “Metro Incident Standard Operating Procedures” (con’t)
- Key Points Regarding Unit Responsibilities (con’t):
 - Third Due Truck –
 - Smoke Management/Ventilation
 - Rescue Squad –
 - Searches/ETEC Cart
 - We No Longer Dispatch Command Officers To ROCC (FCGO 12-08)
 - We No Longer Activate The FCDS On Rail Cars

MCFRS - METRO COPDI

FCDS

- Filter Capacitor Discharge Switch (FCDS)
- Dumps stored power in car capacitors



*Note: All Metro cars have been updated so that stored power is automatically dumped within 10 seconds after powering down the 3rd rail. Therefore, the FCDS's no longer need to be operated by Fire Dept Personnel

MCFRS - METRO COPDI

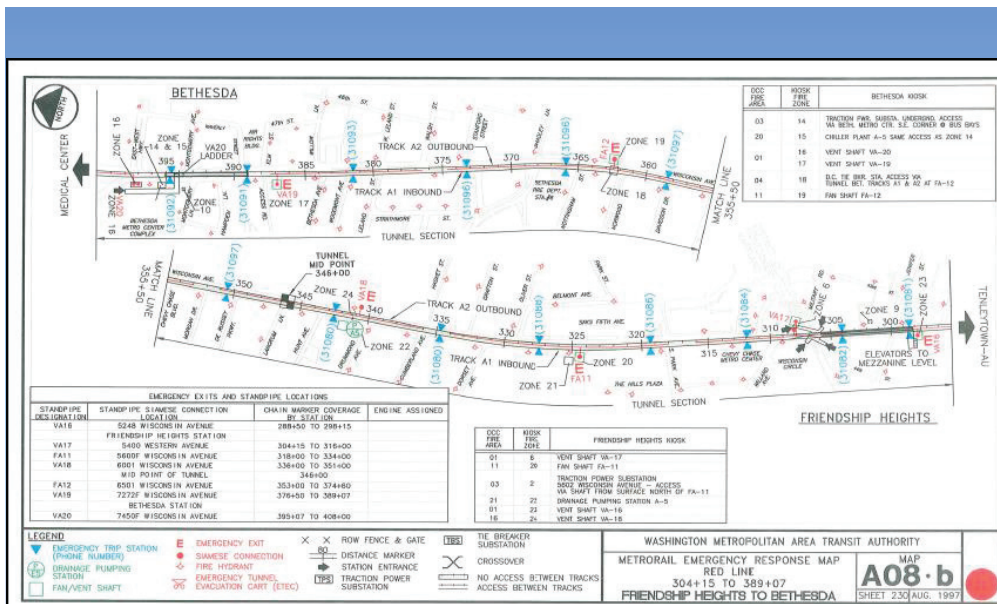
METRO SOP's

- FRC Policy 24-06 "Metro Incident Standard Operating Procedures" (con't)
- Variables:
 - Tunnel Incidents:
 - 1st and 2nd Engine w/ 1st Truck act as a "Task Force", enter tunnel together
 - Same for 4th and 5th Engine, 2nd Truck
 - Yard Incidents:
 - ROCC not involved
 - 2nd Engine reports to Interlocking Operator (Yardmaster)

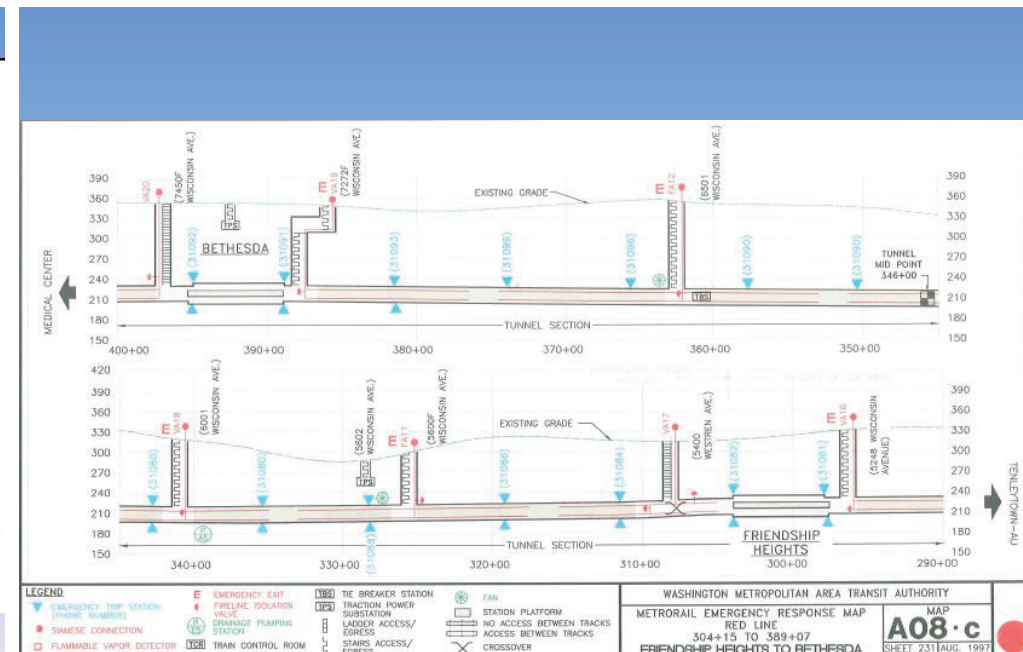
MCFRS - METRO COPDI

SCENARIO #1

MCFRS - METRO COPDI



MCFRS - METRO COPDI



MCFRS - METRO COPDI

SCENARIO #1

- What is the closest street intersection located directly above the reported incident chain marker?
 - Wisconsin & S. Park Ave
- What standpipe (FDC) would need to be “charged” if a handline were required in the tunnel? Which unit would you call upon to do so?
 - FA11; Nobody dispatched there
- How would you communicate/coordinate with the DC units at FH?
 - Pick a TG; Send Liaison; Conference Line

MCFRS - METRO COPDI

WATER SUPPLY

- The PSCC Matrix
- Box Alarm units Covering Shaft Connections
- Confusion Amongst Water Supply Units Arriving
- Identify Shaft and Unit Early
 - Need Chain Marker!

*** NOTE: WMATA NEEDS TO BE NOTIFIED ANYTIME A SYSTEM IS CHARGED**

MCFRS - METRO COPDI



WISCONSIN/OLD GEORGETOWN

Station Connection

Shaft VA20
(7450 Wisconsin Ave)

WISCONSIN/ELM

Shaft VA19
(7272 Wisconsin Ave)

MCFRS - METRO COPDI





COMMUNICATIONS

ROCC

- Controls day-to-day operations of WMATA Rail, including all train movement, electrical systems and station operations
- Maintains constant radio contact with all personnel responsible for running the rail system
- Telephone communications with OCC are available throughout the system via Wayside/BLB and PABX phones
- A communications link with ROCC should be established early for every emergency within the WMATA system

ROCC FIRE LIAISON

- Uniformed Fire Officer
- 24/7 Effective Summer 2016
- Multi-Jurisdiction Radio Capabilities
- Contact via radio or 1652
 - Contact phone number likely to change



MCFRS - METRO COPDI

TELEPHONE SYSTEMS

Wayside/PABX Phones

- Found in the ETS boxes in the roadway at approximately every 800ft, at each end of station platforms, in some service rooms
- To reach ROCC from a phone, dial **"2-1652"**
 - Request the Assistant Superintendent or Fire Liaison
 - Some documents still reference dialing "0", "1970", "2218"
- Determine who is making contact
 - There's only one Asst Superintendant!

MONTGOMERY COUNTY FIRE AND RESCUE

Outside Public Phones

- OCC can be reached from any landline or cellphone by dialing 202-962-1652
- Fire ECC has a direct line to OCC-This line can also be patched into the conference call line by OCC if necessary

MONTGOMERY COUNTY FIRE AND RESCUE

Metro Radio System

- The Metro system is equipped with a 2-way radio system
- Every train, train operator, station manager, rail supervisor, and certain support personnel have radio capability to contact ROCC
- Metro Transit police also have access to ROCC
- Yards also have access to the radio system, however normally operate on a different frequency

MONTGOMERY COUNTY FIRE AND RESCUE

Fire/Rescue Radio Systems

- Stations and tunnels are equipped with antennas and BDAs that carry and transmit the local jurisdiction's frequency
- Bi-monthly radio testing
- Although the tunnel systems are robust, there do exist pockets of intermittent communications in tunnels and around station platforms
- Personnel should implement a radio relay using conventional (talk-around) channels when operational talkgroup fails
- Radio relay used only until NCR radio team arrives and sets up comm link to assigned incident talkgroup

MCFRS - METRO COPDI

Radio Relay

Suggested Practices:

- Command assigns a "Comms Company" or group
- Should consist of at least 4 personnel
- OIC or group leader positions closest to incident scene
 - Monitors any operating talkgroup or conference line
 - Initiates any messages from scene for command
 - Radio relay designation "Comm Leader"
- Firefighter #1 positions at bottom of stairs or escalator on platform level
 - Designated "Platform Comms"
 - Link between incident and mezzanine level

MCFRS - METRO COPDI

Radio Relay

- Firefighter #2 positions at top of stairs or escalator on mezzanine level.
 - Radio relay designation "Mezzanine Comms"
 - Link between platform and Command Post
- Firefighter #3 (Driver) is used at command post or anywhere in between to fill gap coverage
- All transmissions within the radio relay should begin with "Message for relay..."
 - Example: "Command to mezzanine comms; message for relay- provide number of injured passengers"

MCFRS - METRO COPDI

Conference Lines

- 2 Conference lines available for use:
 - Command Conference Line: 202-962-2890
 - Up to 25 users
 - Should be used by Command staff, MTPD, OEM and ROCC personnel only (IC may deviate and add division or group supervisors)
 - Fire Conference Line: 202-962-2218
 - Should be used by on-scene FD personnel only when comms have failed
- Both numbers available wayside by dialing 2-2890 or 2-2218
- Do not announce numbers over radio
- Currently not password protected
- Dial-in, wait 5 seconds

MCFRS - METRO COPDI

VRS

- The Vehicle Repeater System (VRS) located in command vehicles operate much like the conventional talk-around channels
- If a portable radio transmission on 7-Oscar will not reach command, most likely a transmission on the VRS talkgroup will not reach the repeater located in the same vehicle for rebroadcast.
- Bottom line- VRS should be avoided during underground Metro incidents

MCFRS - METRO COPDI

STATION COMMUNICATIONS

- All stations equipped with a PA system
 - Can be used by either OCC or the station manager
 - Microphone for station system is located in the Kiosk
- Passenger Emergency Reporting System
 - Passengers/FFs can communicate with Kiosk using PERS
 - Mounted on pylons or stanchions throughout stations



MCFRS - METRO COPDI

RAIL CAR COMMUNICATIONS

- Rail cars equipped with a PA system
- Rail car system has return boxes located at ends of rail cars-Allows 2-way communication

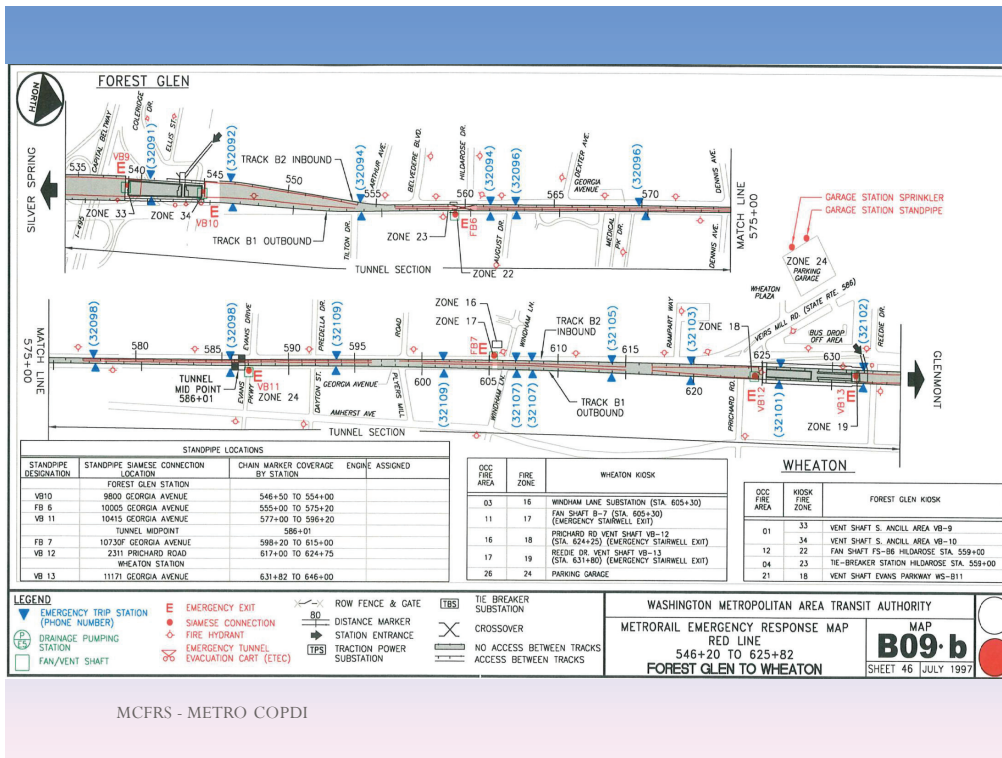


MCFRS - METRO COPDI

Question #1

- Metro contacts our PSCC and advises that there's a fire in the Wheaton Traction Power Substation. A Box Alarm is dispatched to the Wheaton Station.
 - Where is the substation located?
 - What is the closest intersection and fire hydrant?
 - What is the chain marker?
 - Is the substation located above or below ground?
 - Where is the best access point?

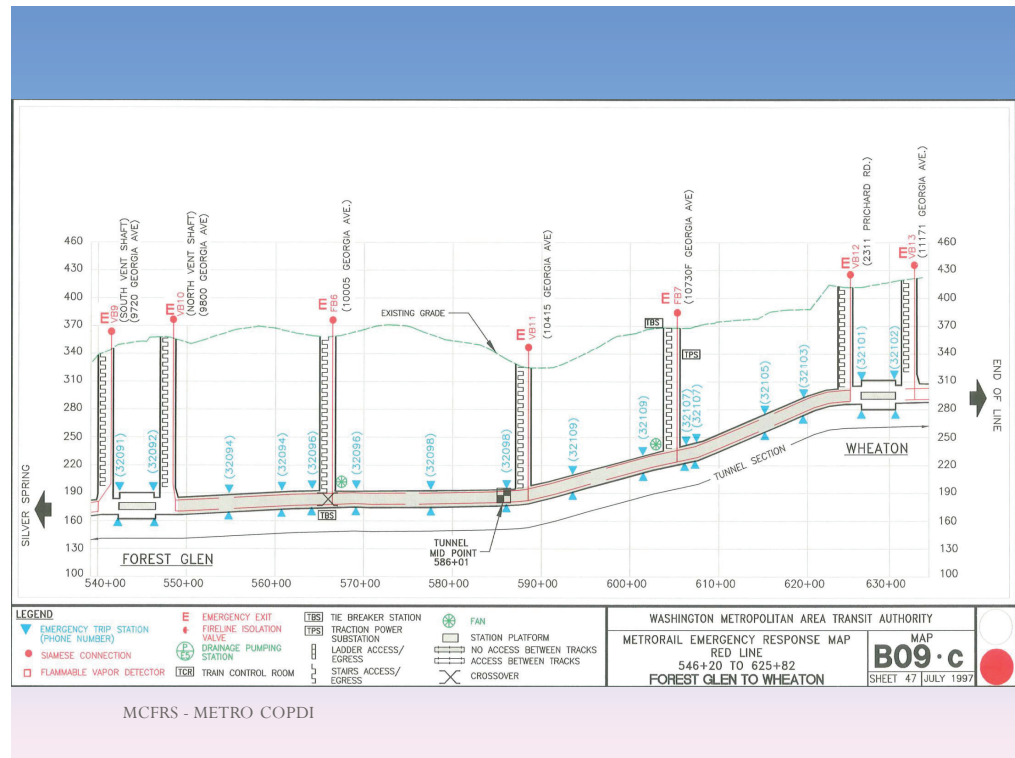
MCFRS - METRO COPDI



MCFRS - METRO COPDI

MANAGING 3rd RAIL POWER

MCFRS - METRO COPDI



MCFRS - METRO COPDI

ELECTRICAL SYSTEMS

- Traction Power System
 - Also known as "Third Rail Power"
 - Power collected by train cars for propulsion
 - PEPCO supplies 13,800 Volts AC
 - Traction Power Substations (TPSS) step down and rectify power to 750 Volts DC

THIRD RAIL POWER PRESENTS THE GREATEST RISK TO FIRE/RESCUE PERSONNEL WORKING WITHIN THE RIGHT OF WAY!!

MCFRS - METRO COPDI

THIRD RAIL

- 750 Volts DC
- Not one continuous rail
- Third rail segmented in many areas
- Found in maximum lengths of 800ft
- Approximately 4-1/2ft higher than running rails
- Protected by gray fiberglass cover
 - Cover for weather protection only
 - **DO NOT STEP ON COVER**

**THIRD RAIL SHOULD ALWAYS BE CONSIDERED
ENERGIZED UNTIL TESTED**

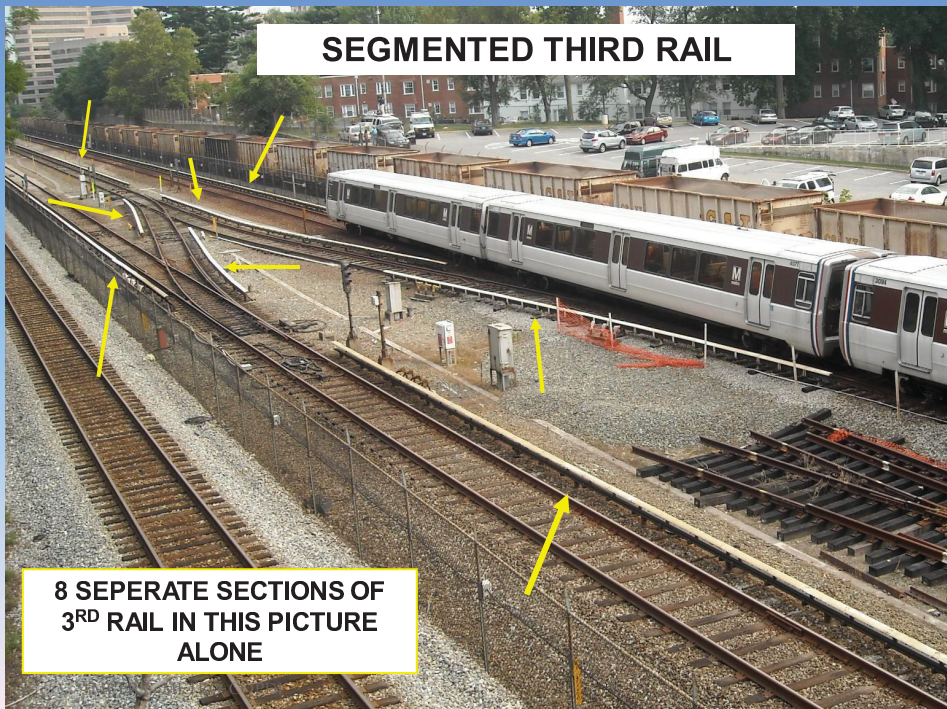
MCFRS - METRO COPDI

THIRD RAIL



MCFRS - METRO COPDI

SEGMENTED THIRD RAIL



THIRD RAIL

- **Insulators**
 - Common cause of nuisance fires along ROW
 - Damaged or dirty insulators may short, smoke or catch fire
 - Incidents normally mitigated by Metro without FD intervention



MCFRS - METRO COPDI

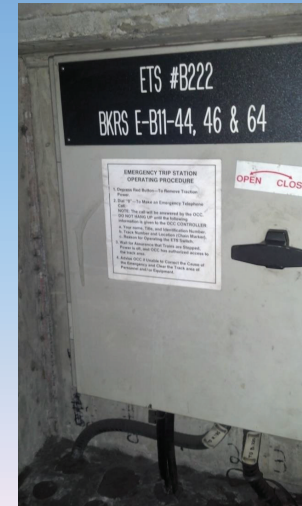
EMERGENCY TRIP STATION

- Located every 800ft along Right of Way (ROW) and at the end of each station
- Each box identified by a **BLUE** light
 - Blue light DOES NOT indicate 3rd rail status
- Each ETS box contains:
 - A red mushroom button which isolates specific sections of 3rd rail power
 - A schematic map detailing which sections
 - A wayside telephone

MCFRS - METRO COPDI

EMERGENCY TRIP STATION

- Also known as “ETS Box” or “Blue Light Box”



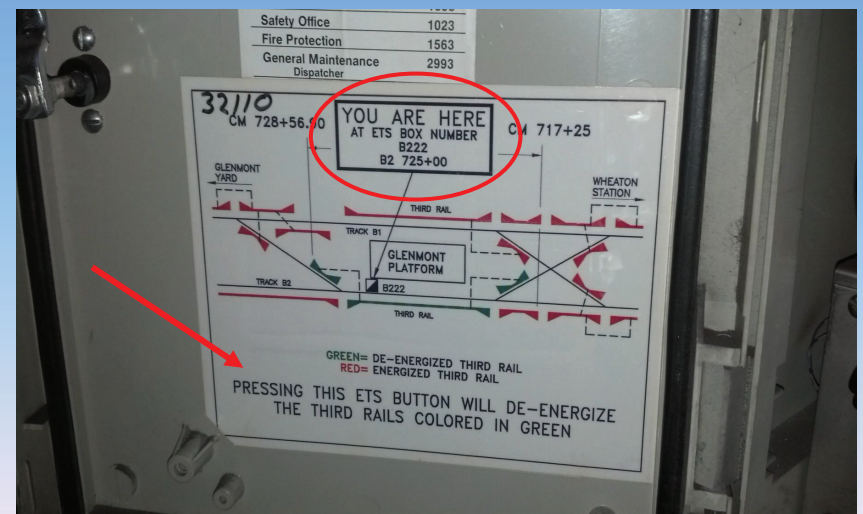
MCFRS - METRO COPDI

EMERGENCY TRIP STATION



MCFRS - METRO COPDI

EMERGENCY TRIP STATION



MCFRS - METRO COPDI

EMERGENCY TRIP STATION

- ETS boxes are **not** the preferred method of de-energizing third rail power
- Should only be used when there is an **imminent** threat to life safety
- Third rail power isolation **must** be coordinated through OCC
- Activation of the ETS button does not prevent OCC from reenergizing the third rail; coordination is essential!

MCFRS - METRO COPDI

REMOVING 3rd RAIL POWER

- Must be done prior to entering ROW
- Preferred method through OCC
 - Contact OCC
 - Dial "2-1652" from any wayside phone (or "0")
 - Avoid entering ROW until train movement has been confirmed STOPPED
 - Dial 202-962-1652 from any outside phone
 - Provide OCC with name, rank and unit number
 - Describe emergency
 - Provide section of third rail using chain markers
- ETS Box may be used for imminent threat
 - OCC must be contacted immediately

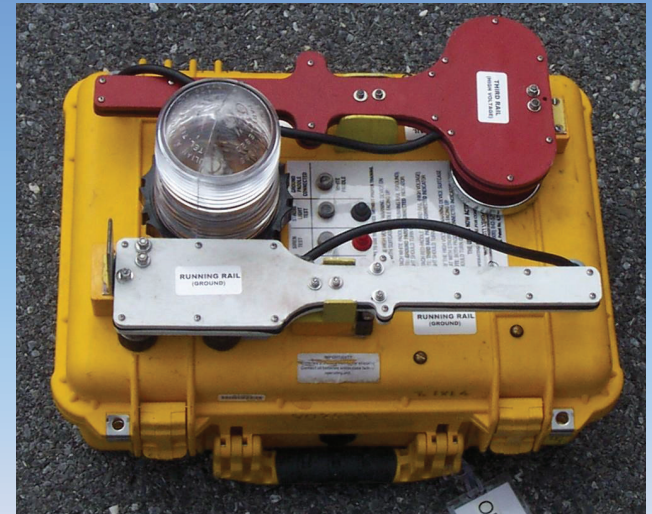
MCFRS - METRO COPDI

TESTING 3rd RAIL

- Must be done after OCC confirms power down
- Must be done prior to affixing Warning Strobe and Alarm Device (WSAD)
- Test third rail immediately upon entering ROW
- Personnel must ensure any and all segmented sections of third rail in the are of the scene are tested
- Power may be passed through the pickup shoes of a single train car in contact with separate sections of third rail

MCFRS - METRO COPDI

WSAD



WHO CARRIES THEM? WHERE CAN WE GET MORE?

MCFRS - METRO COPDI

RED TAG

- Red Tag procedure used for operations requiring extended “Power-down” operations
- Power is removed manually via breakers in Traction Power Substation (TPS)
- Lock-out/Tag-out is utilized
- “Red Tag” given to incident commander
- Red tag is not returned until incident scene is clear and IC authorizes power restoration

MCFRS - METRO COPDI

IMPORTANT

- NO PERSONNEL SHOULD ENTER TRACKBED UNTIL 3rd RAIL IS CONFIRMED DOWN, TESTED, AND WSADs IN PLACE!
 - Exceptions?

MCFRS - METRO COPDI

CSX

- In many areas, the METRO ROW runs either inside or outside the CSX ROW.
- When CSX traffic needs to be stopped:
 - Have Milepost number!
 - CSX is in Florida; they are not familiar with MoCo, MD.
 - Metropolitan Subdivision
 - All Mileposts begin with the track identifier “BA”
 - Utilize CSX maps or access point matrix to determine MPs
 - Ensure you specify BOTH TRACKS
 - 10 Minutes
 - Use spotters- 2 miles
 - CSX access points do not match Metro Access Points (BLB)

MCFRS - METRO COPDI



VENTILATION

MCFRS - METRO COPDI

VENTILATION

- Normal ventilation of the underground portion occurs from train movement through the system with mechanical fans to assist in fresh air exchange
- Ventilation during emergency situations is accomplished mechanically by fans in the supply or exhaust mode

MONTGOMERY COUNTY FIRE AND RESCUE

TUNNEL VENTILATION

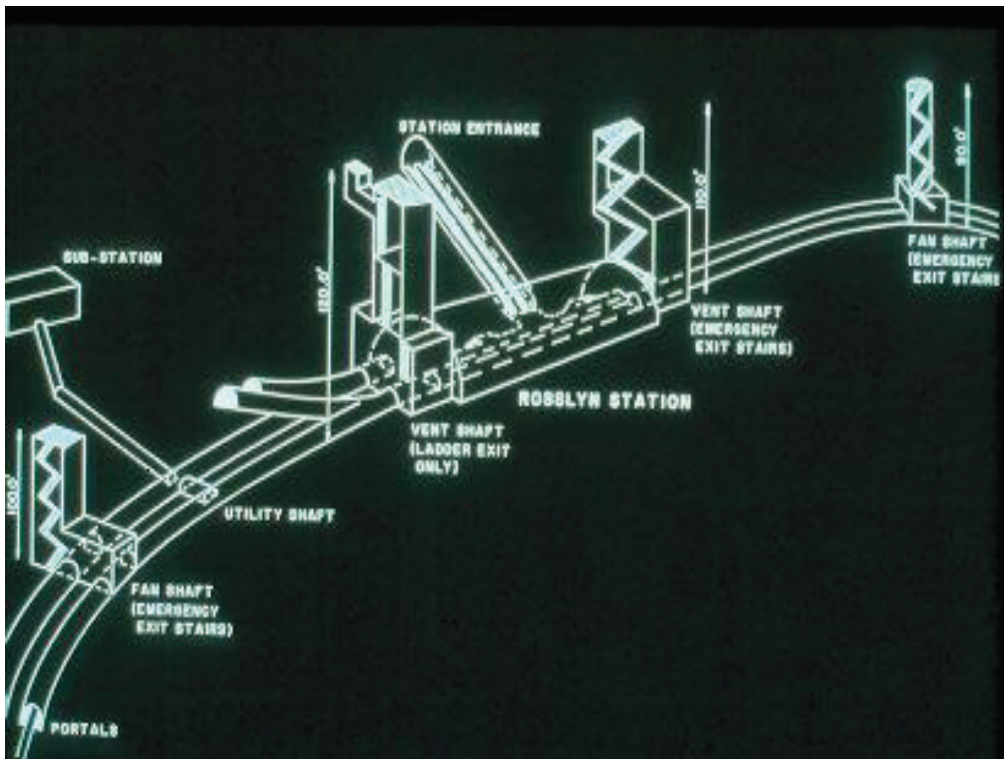
- As trains move forwards, air is forced ahead of it
- Air is also drawn in behind the train
- Vents shafts allow air to be moved up and out of the system as a train approaches a station
- Prevents blast of air on passengers waiting

MONTGOMERY COUNTY FIRE AND RESCUE

TUNNEL VENTILATION

- Additional vent or fan shafts are located between stations
- These work the same as vent shafts near the station for air exchange
- Vent shafts have thermostatically controlled louvers and fans
- Work in conjunction with emergency ventilation fans

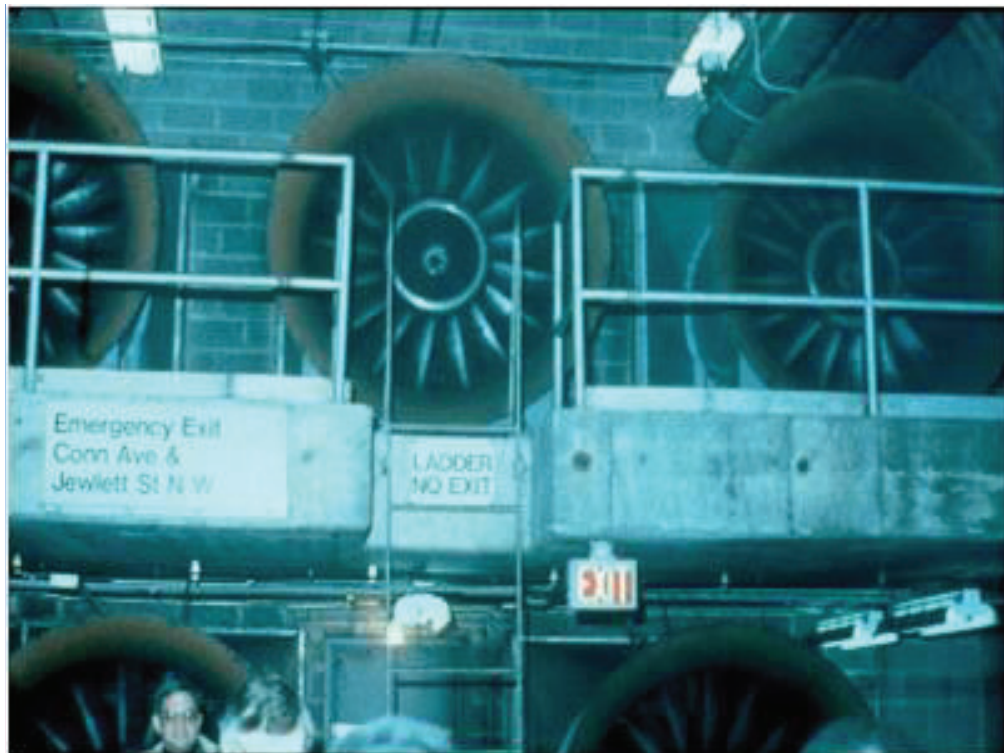
MONTGOMERY COUNTY FIRE AND RESCUE



EMERGENCY VENTILATION

- Emergency Vent Fan Shafts
 - Power operated and reversible
 - 2 to 7 60" fans
 - Capable of 50,000 CFM exhaust
 - Capable of 35,000 CFM supply
 - Electrically/Pneumatically controlled
 - 40-60 seconds for fans to start
- OCC will begin operation of fans in appropriate direction
- Fire/Rescue IC assumes control of fans after contacting ROCC
- Emergency Fan Control boxes same as those found in stations

MONTGOMERY COUNTY FIRE AND RESCUE



TUNNEL VENTILATION

- Remote Control = Thermostats/ROCC operate fans
- ROCC can operate fans remotely during emergencies



MONTGOMERY COUNTY FIRE AND RESCUE



MCFRS - METRO COPDI

STATION VENTILATION

- Under platform ventilation systems
 - Assist in air exchange at stations
 - Exhaust and draw air from under trains and away from platforms
 - Prevents hot bursts of air on passengers
 - Can be operated in supply or exhaust
 - Utilizes same chase as standpipe

MONTGOMERY COUNTY FIRE AND RESCUE

VENTILATION CONSIDERATIONS

- **Fans in Supply Mode**
 - Consider where it will be exhausted
 - Could block an exit needed to evacuate passengers
 - Advisable to have fresh air pushed into the exit routes for evacuation
 - If supply fan shaft is evacuation exit, utilize another fan shaft to supply air and prevent passengers from travelling through smoke
- **Fans in Exhaust Mode**
 - Only use as last resort for entrance or evacuation
 - Products of combustion will be travelling up shaft

MONTGOMERY COUNTY FIRE AND RESCUE

VENTILATION CONSIDERATIONS

- **Fans in Off Mode**
 - May be necessary to completely shut down during chemical or biological release
 - This prevents contamination into other areas
 - Could contaminate above ground locations
 - Must stop train movement to prevent piston movement effect of air into unaffected areas

* Anytime F/R Manually operates fans, ROCC MUST BE CONTACTED

MONTGOMERY COUNTY FIRE AND RESCUE

VENTILATION CONSIDERATIONS

- Fans in Automatic Mode
 - Under the control of ROCC
 - IC can communicate with ROCC to select operational mode
 - Coordinate with ROCC to instruct passengers which direction to evacuate

MONTGOMERY COUNTY FIRE AND RESCUE

RAIL CARS & EVACUATION

MCFRS - METRO COPDI

EVACUATION

- Determine Need For Evacuation
 - Has Station Been Evacuated?
 - Does It Need To Be?
 - Is there an IDLH? Are we operating?
 - Are conditions getting better or worse?
 - What is Metro's plan? Their SOP's?
 - Does It Need To Be Closed?
 - If so, can trains still run through it (bypass)?
 - If not, consider effect or consequences on system
 - Example: Closing Forest Glen completely at 5pm on a Monday...
 - What happens to Downtown Silver Spring?

MCFRS - METRO COPDI



EVACUATION

- Status of Train(s)?
 - Does A Train Need To Be Evacuated?
 - Sheltering In Place Preferred
 - Consider HVAC (Need 3rd Rail)
 - Rescue Train (Need 3rd Rail)
 - Evacuation by foot to nearest station
 - Avoid walkway
 - Shaft Evacuation- last resort!
 - Requires one to be physically fit
 - Open Grates
 - Fear of heights
 - Products of combustion
 - Fans

MCFRS - METRO COPDI

EVACUATION

If Evacuation Is Necessary:

- Determine Evacuation Route
- Request PD For Traffic Control (Foot and Vehicle)
- Establish Collection Point(s)
- Begin Accountability/Triage
- How Many Civilians Can You Expect On A Red Line Train At 1700hrs On A Weekday?
- (8 Cars)(175 Passengers)= 1400
- Don't Block Buses



MCFRS - METRO COPDI

RAIL CARS

- Over 800 cars operate within Metro system during rush hours
- Each car has a capacity of 175 passengers
- Car measurements:
 - Length: 75'
 - Height: 10' 10"
 - Width: 10'
 - Weight: 40 tons



MCFRS - METRO COPDI

MANUFACTURERS

- 1000 Series
 - Rohr Corporation
 - Built 1973-1976
- 2000, 3000, 4000 Series
 - Breda Construction
 - Built 1981-1993
- 5000 Series
 - CAF/AAI Constructed
 - Built 2001-2004
- 6000 Series
 - Alstom Transportation
 - Built 2005-2008
- 7000 Series (Dulles Silver Line Only)
 - Kawasaki Corporation
 - Built 2012-2017



MCFRS - METRO COPDI

CAR CONFIGURATION

- Must operate as “married” pairs (A+B Cars)
 - “A” Cars
 - Carry even numbers
 - Equipped with the Air Compressor for the pair
 - “B” Cars
 - Carry odd numbers
 - Equipped with the Batteries and generator for the pair
- Metro system designed for 4 sets (8 cars)
- 6-car trains commonly used during non-rush
- Limited by 600ft station platforms



CAR COMPONENTS

- Side windows
 - Combination Safety Glass/Polycarbonate
 - Designed not to open
 - Extremely difficult to force
 - Rubber “zip” strip may be removed from interior with significant effort
 - Avoid side windows when possible



MCFRS - METRO COPDI

CAR COMPONENTS

- Operators side sliding windows
 - Operated from interior with “XX” barrel key
 - May be removed from exterior with large blow from tool (removes metal frame)



MCFRS - METRO COPDI

CAR COMPONENTS

- Front bulkhead windows
 - Laminated glass
 - Removal similar to vehicle windshields



MCFRS - METRO COPDI

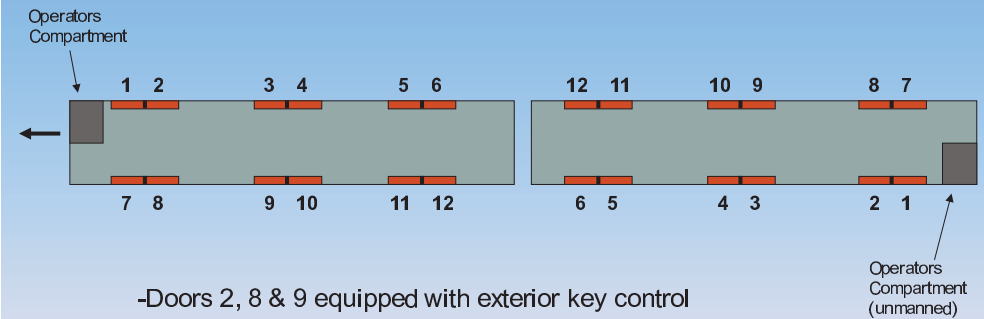
CAR COMPONENTS

- Car Doors
 - 12 total doors; 3 sets of sliding doors on each side of car
 - Doors numbered 1-12 in starting behind operators compartment of each car
 - “XX” barrel key operates doors
 - Center sets of doors equipped with manual pull handles to open in emergency
 - Door #9 equipped with handle and step below
 - Door controls continue to operate without 3rd rail power

MCFRS - METRO COPDI

CAR COMPONENTS

- Door Numbering (married pair)

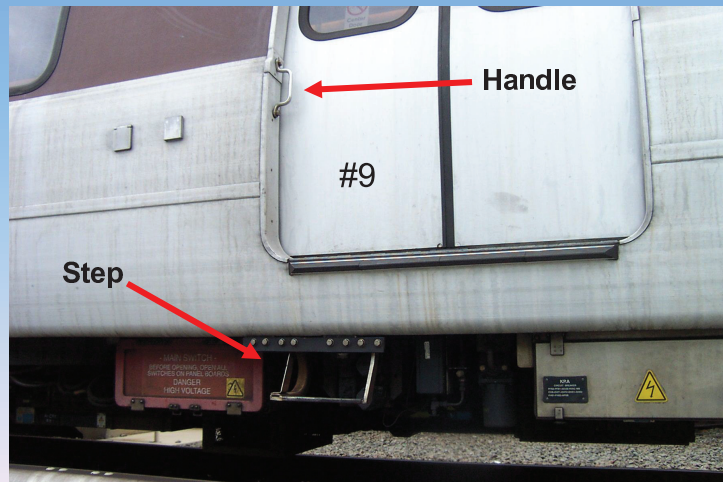


- Doors 2, 8 & 9 equipped with exterior key control
- Doors 4 & 9 equipped with EEDR
- Door # 9 equipped with handle and step below

MCFRS - METRO COPDI

CAR COMPONENTS

- Door #9



MCFRS - METRO COPDI

CAR COMPONENTS

- Manual Door Controls
 - **BREDA** Series Emergency External Door Release (EEDR)
 - Outside Doors 4 & 9



MCFRS - METRO COPDI



CAR COMPONENTS

- Manual Door Controls
 - **ROHR Series Emergency External Door Release (EEDR)**
 - Outside Doors 4 & 9
 - Large protective cover

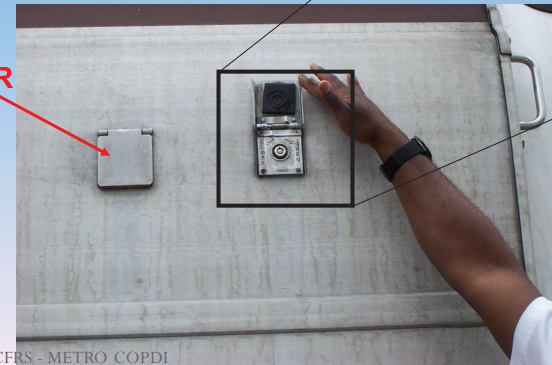


MCFRS - METRO COPDI

CAR COMPONENTS

- Manual Door Controls
 - Exterior key control
 - “XX” Barrel Key
 - Doors 2, 8 & 9

EEDR

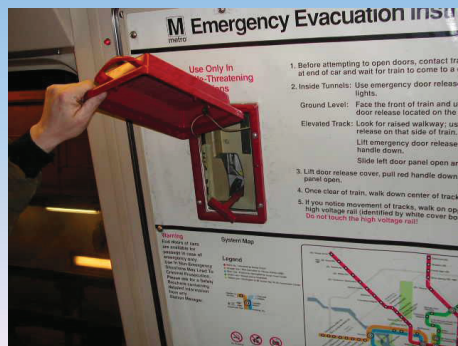


MCFRS - METRO COPDI



CAR COMPONENTS

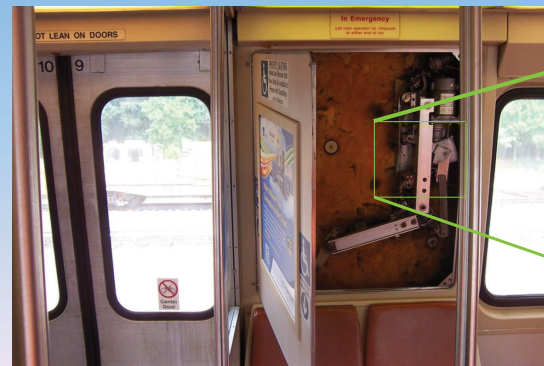
- Manual Door Controls
 - Interior emergency pull handles
 - Doors 4 & 9
 - Passenger accessible
 - Releases single door; must be pushed to full open position



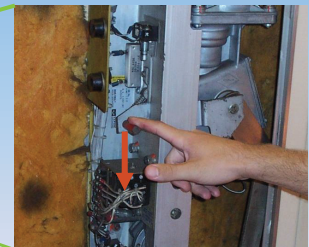
MCFRS - METRO COPDI

CAR COMPONENTS

- Manual Door Controls
 - 1000 (Rohr) Series Interior Door Release Controls
 - Located behind side panels adjacent all doors
 - Pull/Push down red levers to release doors



MCFRS - METRO COPDI



CAR COMPONENTS

- Manual Door Controls
 - Breda Series Interior Door Release Controls
 - Located behind cover above all doors
 - Pull down red levers to release doors



MCFRS - METRO COPDI

CAR COMPONENTS

- Bulkhead doors
 - Preferred method of entry & egress within ROW
 - Each car equipped with a custom wooden or fiberglass ladder
- Doors equipped with 3 locks/latches
- Use "XX" barrel key



MCFRS - METRO COPDI



CAR COMPONENTS

- Bulkhead Ladders
 - Rohr Series- Located under the bench seat across from operators console
 - Use "XX" barrel key to access



MCFRS - METRO COPDI



CAR COMPONENTS

- Bulkhead Ladders
 - Breda Series- Located under bench seat adjacent door #7
 - Slotted thumb screws secure door



MCFRS - METRO COPDI

CAR COMPONENTS

- Collector Shoes
 - (4) “Shoes” on each rail car
 - Shoes ride on top of 3rd rail and receive 750 VDC
 - Located directly under corner door sets
 - Easily mistaken for steps
 - When one shoe is in contact with the 3rd rail, EVERY shoe on that car is energized, whether or not they are in contact with the 3rd rail themselves
 - Use extreme caution when operating around the collector shoes!

MCFRS - METRO COPDI

CAR COMPONENTS

- Collector Shoes



MCFRS - METRO COPDI

CAR COMPONENTS

- Collector Shoes



MCFRS - METRO COPDI

CAR COMPONENTS

- Collector Shoes

NOT A STEP!!!!



MCFRS - METRO COPDI

RAIL TEAM

- 12 Member Roster
- Respond to any and all rail-related events
- Subject Matter Experts
- Assist IC at CP or in hot zone
- Assist with notifications
- Assist with MP ID or access points
- Assist with identifying spotter locations
- Assist with training and tours

MCFRS - METRO COPDI

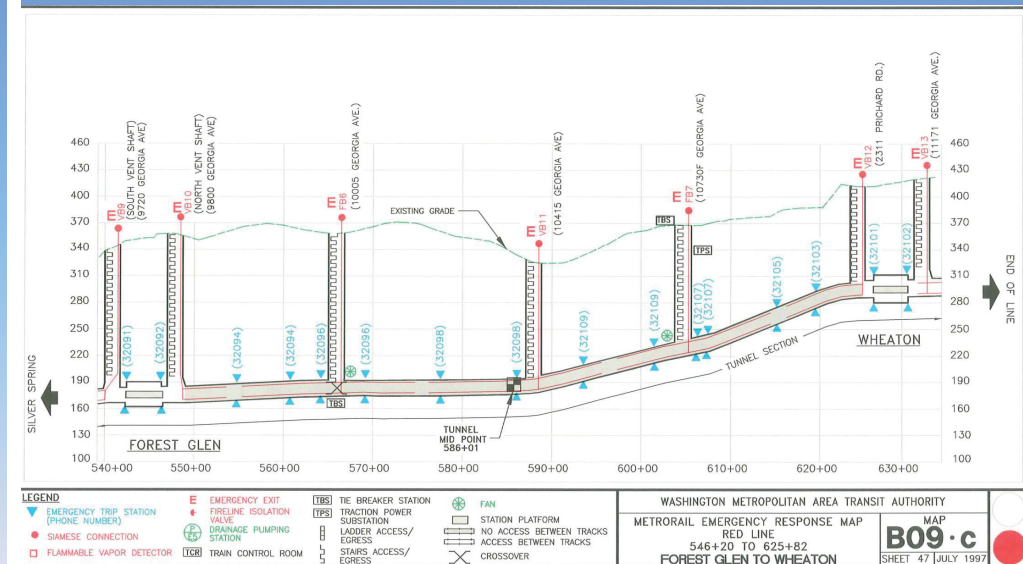
RAIL TEAM

NAME/RANK	
Capt. R. Blinkhorn	01/A
D/C Tom Jones	05/V
A/C Michael Nelson	DOC/C
Capt. Penelope Ingles	20/B
Capt. James Randall	25/B
Capt. William Porter	BATT3/B
Capt. Frantz Pinthiere	32/A
Capt. Pedro Meneses	15/A
B/C Kelvin M. Thomas	PSTA
Lt Chase Fabrizio	16/B

MCFRS - METRO COPDI

SCENARIO #2

MCFRS - METRO COPDI



MCFRS - METRO COPDI

